

**ABSTRACT OF THE DISCLOSURE**

The present invention provides a *Drosophila melanogaster* GPCR (DmGPCR) polypeptides and polynucleotides which identify and encode such a DmGPCR. In addition, the invention provides expression vectors, host cells and methods for its production. The invention  
5 also provides methods for the identification of homologs in other animals, and of DmGPCR agonists/antagonists, useful for the treatment of diseases in animals and for the control of insects that are injurious or harmful to plants or animals.